

IN THE CLAIMS

1. (Currently amended) Measurement device for detecting medical parameters in the human body, which can be accommodated in a body cavity (2), ~~especially a blood vessel, including~~ the device comprising at least one sensor (3) and a holder (4), ~~characterized in that~~ the holder (4) has at least one first and one second magnetic element (5), of which at least one of the magnetic elements is a magnet and of which one of the magnetic elements is arranged inside of the body cavity and ~~[[one]]~~ the other of the magnetic elements is arranged outside of the body cavity (2), and ~~[[that]]~~ the measurement device (1) is adapted to be fixed by the holder (4) in the body cavity (2).

2. (Currently amended) Measurement device according to claim 1, ~~characterized in that~~ wherein one of the two magnetic elements (5) is a magnet and the other is a part made from a ferromagnetic material.

3. (Currently amended) Measurement device according to claim 1, wherein ~~or 2,~~ ~~characterized in that~~ both of the magnetic elements (5) comprise magnets.

4. (Currently amended) Measurement device according to ~~one of claims 1 to 3,~~ ~~characterized in that~~ claim 1, wherein the at least one sensor (3) is connected rigidly to the magnetic element (5) arranged inside of the body cavity (2).

5. (Currently amended) Measurement device according to claim 1, wherein ~~one of the preceding claims, characterized in that~~ the magnetic element (5) arranged outside of the body cavity (2) is the magnet.

6. (Currently amended) Measurement device according to claim 1, wherein one of the preceding claims, characterized in that the measurement device ~~[[can]]~~ is adapted to be moved within the body cavity (2) by rearranging or shifting the magnet.

7. (Currently amended) Measurement device according to claim 1, wherein one of the preceding claims, characterized in that there are the at least one sensor comprises a plurality of sensors (3), which are provided with the magnetic elements (5) and which can be fixed in the body cavity (2) by at least one magnet.

8. (Currently amended) Measurement device according to claim 1, wherein one of the preceding claims, characterized in that the measurement device ~~[[can]]~~ is adapted to be inserted into the body cavity (2) via an implantation instrument~~[[,]]~~ or a catheter, or the like.

9. (Currently amended) Measurement device according to claim 1, wherein one of the preceding claims, characterized in that the magnetic element (5) arranged outside of the body cavity (2) ~~[[can]]~~ is adapted to be applied to a surface of the body or subcutaneously.

10. (Currently amended) Measurement device according to claim 1, wherein one of the preceding claims, characterized in that the measurement device is at least partially sheathed or encased in a flexible, biocompatible material, ~~especially silicone.~~

11. (Currently amended) Measurement device according to claim 10, wherein ~~one of the preceding claims, characterized in that~~ the measurement device (1), and especially an electronic component[[s]] arranged on the device, are provided with an additional coating.

12. (Currently amended) Measurement device according to claim 1, wherein ~~one of the preceding claims, characterized in that~~ the measurement device is provided with a power supply, especially a battery or an accumulator.

13. (Currently amended) Measurement device according to claim 1, further comprising ~~one of the preceding claims, characterized in that there is~~ an electronic memory unit (9) for temporary storage of data detected by the sensor[[s]] in a region of the sensor (3) or one of the magnetic elements (5).

14. (Currently amended) Measurement device according to claim 13, further comprising ~~one of the preceding claims, characterized in that~~ an evaluation unit for additional processing of the detected data is provided in a region of the sensor (3) or one of the magnetic elements (5).

15. (Currently amended) Measurement device according to claim 1, wherein the at least one sensor comprising a plurality of sensors, ~~one of the preceding claims, characterized in that~~ the sensors (3) are provided for detecting values of pressure, blood-sugar level, hemoglobin count, oxygen and carbon dioxide partial pressures and content, and/or other ~~relevant~~ selected values of the body cavity and/or a medium located therein.

16. (Currently amended) Measurement device according to claim 1, wherein ~~one of the preceding claims, characterized in that~~ at least one storage device (8) is provided on the measurement device for housing a material, ~~especially a medicine,~~ to be introduced into the body cavity (2).

17. (Currently amended) Measurement device according to claim 16, ~~characterized in that~~ wherein a dosing element for controlled release of the material is provided on the storage device (8).

18. (Currently amended) Measurement device according to claim 17, ~~characterized in that~~ wherein the measurement device is part of a control loop and the dosing element releases the material as a reaction to a measurement value detected by the sensor.

19. (Currently amended) Measurement device according to claim 1, wherein ~~one of the preceding claims, characterized in that~~ on the measurement device there is a transmission device (10), through which the measurement device (1) can be connected to a transmitter, receiver, and evaluation unit arranged outside of the body using a wireless and/or wired connection.

20. (Currently amended) Measurement device according to claim 19, ~~characterized in that~~ wherein the transmission device (10) has a radiation output for introducing electromagnetic radiation of different frequencies, especially visible light, into an interior of the body cavity (2).

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21. (Currently amended) Measurement device according to claim 19, wherein ~~or 20,~~
~~characterized in that~~ the measurement device is coupled to the transmitter,
receiver, and evaluation unit via at least one optical fiber cable (11).

22. (Currently amended) Measurement device according to claim 1, wherein ~~one of~~
~~the preceding claims, characterized in that~~ the measurement device is provided
with ~~at least one additional fastening means, especially~~ a thread holder (7).

23. (Currently amended) Measurement device according to claim 1, further
comprising ~~one of the preceding claims, characterized in that the measurement~~
~~device is arranged on~~ a stent cage (12) connected to the measurement device.

24. (Currently amended) Measurement device according to claim 23, ~~characterized~~
~~in that~~ wherein the measurement device is integrated at least partially into a
lattice structure of the stent cage (12).

25. (Currently amended) Measurement device according to claim [[22 or]] 23,
wherein ~~characterized in that the measurement device includes~~ at least one sensor
comprises a plurality of sensors, which are connected to the magnetic elements (5)
and which are arranged in a plane of the stent cage (12), ~~especially~~ in a uniformly
distributed arrangement.